

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P644349

Luminaire Tested: CRQ4DIP-SR4F0-50D150U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644349
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-50D150U940-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

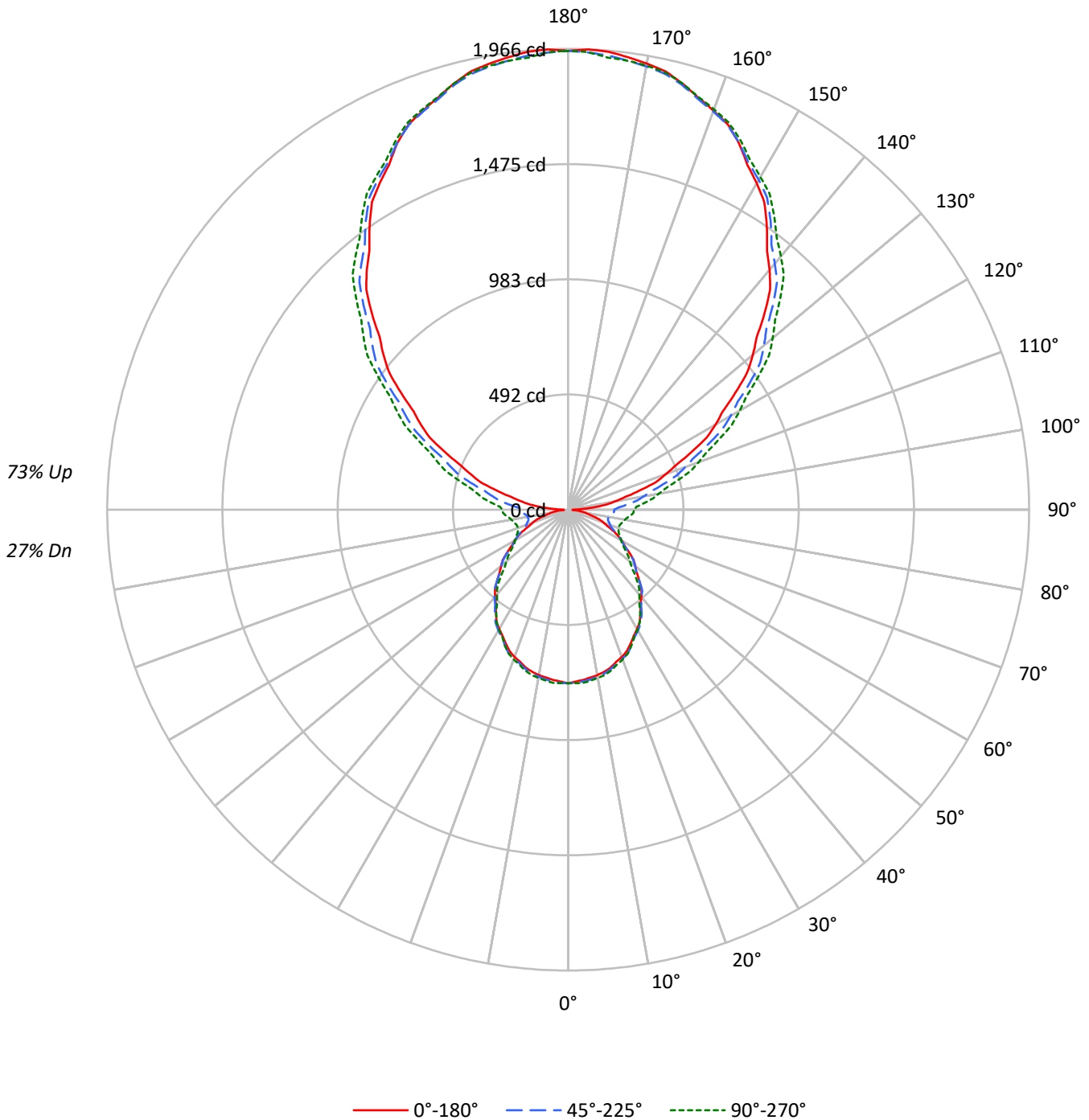
Lumens per Lamp: N/A
Luminaire Lumens: 7689.4 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 62.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P644349

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	102	102	102	102	91	91	91	91	71	71	71	52	52	52	35	35	35	27
1	92	87	83	80	82	78	75	72	61	58	56	45	43	42	30	29	28	21
2	83	76	70	65	74	68	63	58	53	49	46	39	37	34	26	25	23	18
3	76	67	59	54	68	60	54	49	47	42	39	34	31	29	23	21	20	15
4	69	59	51	45	62	53	46	41	41	36	33	31	27	25	21	19	17	13
5	64	52	44	38	57	47	40	35	37	32	28	27	24	21	19	16	15	11
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	15	13	12	9
8	50	38	31	25	45	34	28	23	27	22	19	20	17	15	14	12	10	8
9	46	35	27	22	41	31	25	21	25	20	17	19	15	13	13	11	9	7
10	43	32	25	20	39	29	22	18	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11956	11956	11956
5°	11730	10555	10228
10°	11575	9419	8836
15°	11406	8435	7728
20°	11145	7568	6760
25°	10797	6738	5890
30°	10456	5996	5113
35°	9992	5297	4388
40°	9560	4604	3720
45°	9059	3959	3105
50°	8532	3394	2546
55°	7972	2845	2160
60°	7438	2377	1882
65°	6781	2025	1720
70°	6146	1769	1661
75°	5377	1683	1713
80°	4489	1750	1851
85°	3273	1978	2092

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9059 cd/sqm



TEST NUMBER: P644349

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	0.9
10°-20°	198.6	2.6
20°-30°	293.5	3.8
30°-40°	338.2	4.4
40°-50°	328.5	4.3
50°-60°	280.4	3.6
60°-70°	224.6	2.9
70°-80°	186.6	2.4
80°-90°	185.6	2.4
90°-100°	256.1	3.3
100°-110°	434.5	5.7
110°-120°	648.3	8.4
120°-130°	840.7	10.9
130°-140°	952.1	12.4
140°-150°	940.8	12.2
150°-160°	795.8	10.3
160°-170°	529.8	6.9
170°-180°	185.3	2.4
0°-30°	562.1	7.3
0°-40°	900.3	11.7
0°-60°	1509.2	19.6
0°-90°	2106.0	27.4
90°-120°	1338.9	17.4
90°-150°	4072.5	53.0
90°-180°	5583.0	72.6
0°-180°	7689.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	729	742	735	736	742	69
15°	698	712	704	705	710	196
25°	630	644	638	635	639	290
35°	536	551	546	534	534	336
45°	430	440	429	414	408	331
55°	317	329	314	297	296	284
65°	209	222	220	233	238	208
75°	113	129	175	218	232	121
85°	34	90	190	251	270	37
90°	18	90	196	258	280	14
95°	104	146	253	312	325	106
105°	316	338	419	473	481	337
115°	579	607	659	698	708	575
125°	871	903	946	981	989	780
135°	1184	1211	1234	1266	1280	912
145°	1477	1496	1504	1515	1531	923
155°	1725	1735	1727	1729	1739	792
165°	1882	1891	1876	1870	1882	531
175°	1961	1970	1945	1936	1936	186
180°	1957	1957	1957	1957	1957	

TEST NUMBER: P644349

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U940-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.5	740.5	740.5	740.5	740.5
2.5°	733.8	744.4	739.6	739.6	740.5
5°	729.0	742.2	735.2	736.4	741.5
7.5°	722.3	736.2	730.4	729.7	735.6
10°	716.4	728.7	723.7	723.8	729.0
12.5°	708.9	723.6	715.4	717.1	722.3
15°	697.6	711.9	703.8	705.0	710.1
17.5°	680.8	693.9	687.5	687.2	692.4
20°	668.3	680.6	676.6	674.7	679.8
22.5°	653.2	666.3	663.3	658.8	664.7
25°	629.6	643.9	638.0	634.9	639.0
27.5°	606.2	621.1	612.6	607.1	610.1
30°	587.8	601.0	595.1	587.8	590.9
32.5°	567.7	582.6	575.0	566.9	568.3
35°	536.5	550.8	545.9	534.4	534.4
37.5°	507.0	520.5	511.0	500.1	497.8
40°	485.3	499.5	488.4	475.8	472.7
42.5°	462.7	476.9	466.6	451.5	446.8
45°	429.8	440.0	428.8	414.0	407.9
47.5°	396.0	408.0	393.2	376.3	369.0
50°	373.4	384.6	372.3	351.2	343.0
52.5°	351.6	362.8	348.0	327.8	322.1
55°	316.9	329.1	313.7	297.0	295.9
57.5°	284.5	296.5	281.5	275.5	272.8
60°	263.6	274.7	261.4	261.3	260.2
62.5°	240.1	252.9	242.1	249.6	251.7
65°	209.2	222.4	220.5	233.0	238.1
67.5°	180.1	192.3	200.0	223.4	231.9
70°	160.0	172.2	189.1	218.3	228.5
72.5°	141.6	154.6	184.0	217.4	228.4
75°	113.0	129.2	175.3	218.2	232.4
77.5°	87.9	108.2	173.7	223.5	239.2
80°	71.1	99.6	176.1	228.5	245.7
82.5°	56.1	92.6	179.4	237.6	254.8
85°	34.5	90.4	190.5	251.2	269.5
87.5°	18.6	90.8	196.4	258.4	279.0
90°	17.7	89.9	195.6	258.4	279.8
92.5°	49.3	106.8	215.5	276.5	292.2
95°	104.0	145.6	252.6	312.2	325.4
97.5°	160.1	193.1	294.7	351.0	363.6
100°	201.6	229.0	326.3	381.6	391.8
102.5°	247.3	269.8	362.8	414.9	427.5
105°	315.9	338.2	418.7	472.9	481.1
107.5°	391.9	415.3	484.6	536.7	546.3
110°	442.6	470.0	531.9	580.0	591.2

TEST NUMBER: P644349

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U940-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	497.5	524.9	580.1	626.5	637.7
115°	578.7	607.1	658.7	698.4	708.5
117.5°	663.9	692.7	739.9	778.1	787.9
120°	726.2	752.6	798.9	835.5	843.6
122.5°	781.1	811.5	857.1	893.6	901.8
125°	870.6	903.1	946.4	980.9	989.0
127.5°	962.9	993.3	1033.3	1068.2	1078.8
130°	1028.5	1054.9	1089.8	1126.4	1138.6
132.5°	1090.0	1116.4	1147.1	1183.0	1196.8
135°	1184.3	1210.7	1234.2	1265.7	1279.9
137.5°	1274.5	1300.1	1318.1	1343.1	1360.9
140°	1336.0	1358.4	1371.3	1394.6	1410.8
142.5°	1392.5	1414.9	1424.5	1444.4	1460.7
145°	1477.3	1495.6	1504.3	1515.1	1531.3
147.5°	1556.7	1574.5	1578.3	1587.7	1597.8
150°	1608.2	1624.5	1624.8	1629.2	1639.4
152.5°	1656.4	1671.0	1666.4	1669.1	1680.9
155°	1724.6	1734.7	1726.6	1728.9	1739.1
157.5°	1778.6	1788.7	1776.1	1780.0	1788.1
160°	1811.8	1822.0	1807.7	1809.9	1818.1
162.5°	1843.4	1850.3	1837.6	1834.9	1846.3
165°	1882.5	1890.6	1876.2	1870.3	1882.5
167.5°	1915.7	1923.8	1904.9	1898.5	1910.7
170°	1932.3	1940.5	1919.9	1911.8	1924.0
172.5°	1947.3	1955.4	1933.2	1923.4	1932.3
175°	1961.4	1969.5	1944.8	1936.5	1936.5
177.5°	1965.6	1970.5	1952.3	1944.2	1953.9
180°	1957.3	1957.3	1957.3	1957.3	1957.3

(END OF REPORT)